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the mass of the system will be greater and the parallax consequently less. If the data used are correct, the computed values are therefore a maximum.

With reference to stars having spectra between the second and third types, the star λ *Andromedæ* is, I find, an interesting case. The spectroscopic observations show a period of about 19·2 days and an orbital velocity of about 5·6 miles a second. From this I find (supposing the orbit plane to be in the line of sight) a mass of only 0·0119 × Sun's mass. As the star's spectrum is K, according to Pickering it is not comparable with the Sun, and the formulæ given above cannot be used in this case; but as its photometric magnitude is 4·14, the very small mass would suggest that the star is comparatively near the Earth. If we suppose the inclination of the orbit to be 30°, the mass would be increased eight times; but even then the mass would be less than one-tenth of the Sun's mass.

Dublin: 1903 *January* 4.

New Double Stars detected with the 17¼*-inch reflector during the year* 1902. By T. E. Espin.

The following list contains new double stars found during 1902. The weather has been continuously bad throughout the year, and even when the sky has been clear the definition has generally been very poor. Many of the *comites* are far too faint to measure satisfactorily.

No.	B.D.	R.A. 1880.		Decl.		P.	D.	Night.	Mags.		Note.
	°	h	m	°	′	°	″				
113	66·6	0	2·6	+66	37	122·6	6·8	1	8·5	11	...
114	66·7		3·1	66	29	161·6	5·0	3	8·7	11·2	...
115	61·50		16·3	61	34	82·4	9·9	1	8·0	10	...
116	54·87		24·6	54	59	255·9	7·7	1	8·9	8·9	...
117	54·106		27·6	55	3	54·4	3·0	1	9·0	11	...
118	63·111		47·7	63	43	241·3	2·6	2	8·6	8·7	...
119	53·271	1	10·3	54	19	115·1	5·1	1	8·2	10·5	...
120	53·576	2	41·1	53	26	70·3	3·9	1	8·7	12·5	...
121	57·729	3	24·1	57	51	325·5	6·9	2	8·0	13·5	...
122	61·666		55·3	61	50	248·7	5·0	2	8·6	10·5	...
123	44·2120	11	37·4	44	51	203·8	7·4	1	9·1	9·3	AB.
						275·5	42·9	1		9·2	AC.
124	42·2287	12	10·2	42	34	135 ±	5 ±	1	9·0	12·5	Too faint.
125	42·2370		59·9	42	19	119·1	2·4	2	8·0	10·6	...

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No.	B.D.	R.A. 1880.	Decl.	P.	D.	Night.	Mags.		Note.
	°	h m	° ′	°	″				
126	63·1446	18 38·5	+63 41	21·9	4·9	3	11	12	BC faint.
				53·5	73·1	3		8·0	AB, 14 mag. between.
127	62·1649	46·2	62 46	135·7	4·7	1	9·5	9·5	...
128	46·2659	19 13·4	46 58	281·6	4·7	2	8·4	11·5	...
129	53·2264	30·3	53 38		2·9	2	9·2	10·0	Note.
130	60·2017	45·8	+60 51	237·7	2·9	3	9·5	9·7	...
131	53·2323	52·5	+54 3	228·0	7·3	1	8·1	9·0	...
132	56·2364	20 7·2	+56 36	260·7	5·3	3	8·6	8·7	AB.
				60·7	37·8	3		8·6	AC.
133	56·2368	8·4	+56 56	129·4	7·8	2	8·5	9·0	...
134	63·1655	43·1	+63 6	264·3	10·4	3	8·5	9·2	...
135	56·2509	50·8	56 43	195·9	6·2	5	7·0	11·2	...
136	56·2520	56·7	56 46	340·6	5·1	1	9·2	9·3	...
137	61·2112	21 16·2	61 21	75·3	2·7	2	8·9	11·5	BC. Note.
				74·5	45·3	3		6·5	AB.
138	60·2224	17·3	60 11	265·2	8·4	2	6·5	12·8	Note.
139	52·2921	17·3	52 52		5 ±	1	9·0	11	...
140	56·2614	34·7	56 26	N.	5·	2	8·5	13·1	Too faint.
141	60·2281	38·0	60 40	186·6	1·9	1	9·5	9·6	...
142	61·2361	48·6	61 30	332·9	7·9	2	8·8	11·2	...
143	61·2363	48·8	61 30	44·9	6·5	2	8·2	13·5	Very difficult.
144	S. 800	50·3	62 3	280·8	19·8	4	7·2	12·8	Aa. Note.
				43·3	22·4	4		12·2	Bb.
				146·1	62·3	3	7·2	7·8	AB (S. 800).
145	62·2008	53·5	62 7	203·0	2·8	5	9·1	9·5	...
146	52·3140	22 8·1	+52 17	8·4	2·7	1	9·2	9·4	Poor measure.
147	54·2769	19·9	+54 16	25·1	2·0	3	8·3	10·2	AB.
				204·8	29·1	2		10·2	AC.
148	...	26·7	+61 0	286·2	3·5	2	10	10·5	Note.
149	63·2030	23 34·3	+63 39	120·9	6·0	2	8·5	8·7	...
150	64·1848	38·4	+64 23	210·0	3·1	1	9·3	11·0	...

Notes.

129. Position, October 30, 204°·2; November 7, 225°·1; probably a mistake of 20° in one or other measure.

137. The measures on both nights of BC were unsatisfactory.

138. The *comes* is too faint to measure satisfactorily.

144. S. 800. South speaks of a third star, but he probably refers to one of the more distant *comites*, the two closer ones would probably be too faint for his aperture.

148. This pair lies 22$^{\mathrm{s}}$·7 f. B.D. + 60°·2403 and 12″·4 S. of it.

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Observations of Occultations of Stars by the Moon made at the Royal Observatory, Greenwich, in the Year 1902.

(*Communicated by the Astronomer Royal.*)

Day. 1902.	Phenomenon.	Telescope.	Power.	Moon's Limb.	Mean Solar Time of Observation. h m s	Observer.
Jan. 18	Disapp. W. B. (2) II. 1358	Sheepshanks Equat.	150	Dark	5 25 13·38	A. C.
Feb. 12	,, ϵ Piscium	Great Equat.	670	,,	7 39 22·94	B.
12	,, ,,	Sheepshanks Equat.	150	,,	7 39 22 88	W. B.
12	,, ,,	Great Equat. (Corbett)	120	,,	7 39 22·94	W. H. B.
12	Reapp. ,,	Astrographic Equat.	225	Bright	8 18 11·39	W. S.
13	Disapp. Piazzi I. 223	Old Altazimuth	100	Dark	8 27 53·97	A. C.
13 (*a*)	,, ,,	Sheepshanks Equat.	150	,,	8 27 53·55	W.
13 (*b*)	,, ,,	Astro. Equat. Finder		,,	8 27 52·78	W. S.
13	,, ,,	Astrographic Equat.	225	,,	8 27 53·18	Sti.
15	,, Piazzi III. 215	Sheepshanks Equat.	150	,,	11 26 36·64	A. C.
16	,, *i* Tauri	,, ,,	150	,,	6 23 38·10	W.
16	,, ,,	Astro. Equat. Finder		,,	6 23 38·45	W. S.
16	,, ,,	Astrographic Equat.	225	,,	6 23 37·95	Sti.
March 17	,, 26 Geminorum	Sheepshanks Equat.	150	,,	9 18 50·23	A. C.
17	,, ,,	Great Equat. (Corbett)	120	,,	9 18 50·09	R.
17	,, ,,	Great Equat.	670	,,	9 18 49·99	W. B.
17	,, ,,	Astrographic Equat.	225	,,	9 18 50·17	W. S.
20 (*c*)	,, ω Leonis 1st Star	Old Altazimuth	100	,,	8 27 14 81	A. C.